```
MCLK1   MRHSKRTYC-------PDWDERDWDYGTWRSSSSHKRHMRSHSSAREQKR          43
MCLK2   .P.PR.YHSSERGSRGSYHEHYQSRKHKRRR.R.WSSSSDRTRPR.REDS          50
MCLK3   .H.C..YRSPEPDPYLTYRWK.RRS.SREHEGRLRYPSE.EPPPR.S---          47
MCLK4   .......H.----------....S.ESWGHESY.G-.....E.....TQ.NRH        42

MCLK1   CRYDHSKTTDSYYLESRSINEKAYHSRRYVDEY--RNDYMGYEPGHPYGE          91
MCLK2   YHVRSRSSY.DHSSDR.LY-------D.RYCGSYR....SRDRGEAY.DT          93
MCLK3   ---RSRSHDRIP.QRRYREHRDSDTY.CEERSPSFGE.CYGSSRSRHRRR          94
MCLK4   .KPH.QFKDSDCHYLEARCLNERDYRD.RYIDEY-....CEGYVPRH.HR          91

MCLK1   PGSRYQMHS-SKSSGRSGRSSYKSKHRSRHHTSQHHSHGKSHRRKRSRSV         140
MCLK2   DFRQSYEYHRENY..Q...RRKHR.R.RRSRTFSRSSSHSS.RAK-..          142
MCLK3   SRE.APYRTRKHAHHCHK.RTRSCSSASSRSQQSSKRSSR---------..        136
MCLK4   DVESTYRIHC.-.V..R...P.R.RNRPCASH.S.--.....I                139

MCLK1   EDDEEGHLICQSGDVLSARYEIVDTLGEGAFGKVVECIDHKVGGRRVAVK        190
MCLK2   ...A.....YHV..W.QE.....S.....TS.R..Q.V..RR..T...L.        192
MCLK3   ...K....V.RI.SW.QE.....GN....T.......L..ARGKSQ..L.        186
MCLK4   ..................R.....................GMD.LH....        189

MCLK1   IVKNVDRYCEAAQSEIQVLEHLNTTDPHSTFRCVQMLEWFEHRGHICIVF        240
MCLK2   .I...EK.K...RL..N...KI.EK..DNKNL....FD..DYH..M..S.        242
MCLK3   .IR..GK.R...RL..N..KKIKEK.KENK.L..L.SD..NFH..M..A.        236
MCLK4   .....GG.R...R.........S...N.V.........D.H..V....          239

MCLK1   ELLGLSTYDFIKENSFLPFPMDHIRKMAYQICKSVNFLHSNKLTHTDLKP        290
MCLK2   .......F..L.D.NY..YPIHQV.H..F.L.QA.K...D.........        292
MCLK3   ....KN.FE.L...N.Q.YPLP.V.H....L.HALR...E.Q........        286
MCLK4   ..................QI....Q......Q.I....H.........        289

MCLK1   ENILFVKSDYTEAYNPKMKRDERTIVNPDIKVVDFGSATYDDEHHSTLVS        340
MCLK2   ......N...ELT..LEK.....SVKSTAVR.........F.H.....I..        342
MCLK3   ......N.EFETL..EHKSCE.KSVK.TSIR.A......F.H...T.I.A        336
MCLK4   ..........VVK..S........LK.T.....................          339

MCLK1   TRHYRAPEVILALGWSQPCDVWSIGCILIEYYLGFTVFPTHDSREHLAMM        390
MCLK2   ..........E..............IF...V...L.Q...N.......        392
MCLK3   .....P.....E...A..............F...R...L.Q..EN....V..        386
MCLK4   ..........................................Q....K......        389

MCLK1   ERILGPLPKHMIQKTRKRRYFHHDRLDWDEHSSAGRYVSRRCKPLKEFML        440
MCLK2   ......V.SR..R....QK..YRG......NT......REN....RRYLT        442
MCLK3   .K....I.S...HR...QK..YKGG.V...N..D....KEN.....SY..        436
MCLK4   ......I.A.........K....NQ.............R...........        439

MCLK1   SQDAEHEFLFDLVGKILEYDPAKRITLKEALKHPFFYPLKKHT              483
MCLK2   .EAED.HQ....IENM...E....L..G...Q....AC.RTEPPNTKLWD      492
MCLK4   QDSL..VQ....MRRM..F...Q....A...L....AG.TPEERSFHSSR      486
MCLK5   CHDE...K.....RRM.....R....D...Q....DL..RK               489

MCLK1
MCLK2   SSRDISR
MCLK3   NPSR                                                     499
MCLK4                                                            496
```

Figure 1

MPHPRRYHSSERGSRGSYHEHYQSRKHKRRRSRSWSSSSDRTRRRRREDSYHV
RSRSSYDDHSSDRRLYDRRYCGSYRRNDYSRDRGEAYYDTDFRQSYEYHRENS
SYRSQRSSRRKHRRRRRRSRTFSRSSSHSSRRAKSVEDDAEGHLIYHVGDWLQE
RYEIVSTLGEGTSGRVVQCVDHRRGGTRVALKIIKNVEKYKEAARLEINVLEKI
NEKDPDNKNLCVQMFDWFDYHGHMCISFELLGLSTFDFLKDNNYLPYPIHQ
VRHMAFQLCQAVKFLHDNKLTHTDLKPENILFVNSDYELTYNLEKKRDERSV
KSTAVRVVDFGSATFDHEHHSTIVSTRHYRAPEVILELGWSQPCDVWSIGCIIFE
YYVGFTLFQTHDNREHLAMMERILGPVPSRMIRKTRKQKYFYRGRLDWDENT
SAGRYVRENCKPLRRYLTSEAEDHHQLFDLIENMLEYEPAKRLTLGEALQHPF
FACLRTEPPNTKLWDSSRDISR

Figure 2

1 cgcacgggcc tcgccgccag aacgatgccc catccccgaa ggtaccattc ctcagagcga
61 ggtagccggg ggagttacca cgaacactat cagagccgaa agcataagcg aagaagaagt
121 cgctcctggt caagtagcag tgaccggaca aggcggcggc ggagggagga cagctaccac
181 gttcggtccc gaagcagcta tgatgaccat tcgtccgatc ggcggctgta cgatcggcgg
241 tactgtggca gctacaggcg caatgactac agccgggaca gaggggaggc ttactacgac
301 acagactttc ggcagtccta tgaataccat cgagagaaca gcagttaccg aagccagcgc
361 agcagccgaa ggaaacacag aaggcggagg agacggagcc ggacattcag ccgctcatct
421 tcacacagca gccggagagc caagagtgta gaggacgacg ctgagggcca cctcatctac
481 cacgtcgggg actggctaca agagcgatat gaaattgtaa gcaccttagg agaagggact
541 tcgggccgag ttgtgcagtg tgtggaccat cgcaggggcg gaacacgagt tgccctgaag
601 atcattaaga atgtggagaa gtacaaggaa gcagcccgac tagaaatcaa cgtgctggag
661 aaaatcaatg agaaagatcc tgacaacaag aacctctgtg tccagatgtt tgactggttt
721 gactaccatg gccacatgtg tatctccttt gagcttctgg gccttagcac cttcgatttc
781 ctcaaagaca acaactacct gccctacccc atccaccaag tgcgccacat ggccttccag
841 ctctgccagg ccgtcaagtt cctccatgat aacaagttga cacatacgga cctcaaacct
901 gaaaatattc tgtttgtgaa ttcagactac gaactcacct acaacctaga gaagaagcga
961 gatgagcgca gtgtaaagag cacagccgtg cgggtggtgg acttcggcag tgccaccttt
1021 gaccacgaac accatagcac cattgtctcc actcgccatt accgagcccc cgaggtcatc
1081 ctggagttgg gctggtcaca gccatgcgat gtatggagca taggctgcat catctttgag
1141 tactacgttg gcttcaccct cttccagacc catgacaaca gagagcatct agccatgatg
1201 gaaaggatcc tgggtcctgt cccttctcgg atgatcagaa agacaagaaa acagaaatat
1261 ttttatcggg gtcgcctgga ttgggatgag aacacctcag ccggccgcta cgttcgtgag
1321 aactgcaaac ctctgcggcg gtatctgacc tcagaggcag aggaccacca ccagctcttc
1381 gatctgattg aaaatatgct agagtatgag cctgctaagc ggctgacctt aggtgaagcc
1441 cttcagcatc ctttcttcgc ctgccttcgg actgagccac ccaacaccaa gttgtgggac
1501 tccagtcggg atatcagtcg gtgacaatta ggctgggc

Figure 3

MHHCKRYRSPEPDPYLTYRWKRRRSYSREHEGRLRYPSRREPPPRRSRSRSHDR
IPYQRRYREHRDSDTYRCEERSPSFGEDCYGSSRSRHRRRSRERAPYRTRKHAH
HCHKRRTRSCSSASSRSQQSSKRSSRSVEDDKEGHLVCRIGDWLQERYEIVGNL
GEGTFGKVVECLDHARGKSQVALKIIRNVGKYREAARLEINVLKKIKEKDKEN
KFLCVLMSDWFNFHGHMCIAFELLGKNTFEFLKENNFQPYPLPHVRHMAYQ
LCHALRFLHENQLTHTDLKPENILFVNSEFETLYNEHKSCEEKSVKNTSIRVAD
FGSATFDHEHHTTIVATRHYRPPEVILELGWAQPCDVWSIGCILFEYYRGFTLF
QTHENREHLVMMEKILGPIPSHMIHRTRKQKYFYKGGLVWDENSSDGRYVKE
NCKPLKSYMLQDSLEHVQLFDLMRRMLEFDPAQRITLAEALLHPFFAGLTPEE
RSFHSSRNPSR

Figure 4

1 ctgcaggtcg acactagtgg atccaaagaa ttcggcacga gcgcagccgg agcctgggag
61 acgatgcatc actgtaagcg ataccgttcc ccagagccag acccatacct gacgtaccgc
121 tggaagagga ggcggtctta cagtcgggag catgaaggtc gactacgata cccatcccga
181 agggagcctc ccccacggag atcacggtcc agaagccatg atcgtatacc ctaccagcgg
241 aggtaccggg aacaccgtga cagtgatacg tatcggtgtg aagagcggag cccatctttt
301 ggagaggact gctatgggtc ttcacgttct cgacatcgga gacggtcacg agagagggcg
361 ccgtaccgta cccgcaagca tgcccaccac tgtcacaaac gccgtaccag gtcttgtagc
421 agtgcttcct cgagaagcca acagagcagt aagcgcagca gccggagtgt ggaagatgac
481 aaggagggcc acctggtgtg ccggatcggc gattggctcc aagagcgata tgagatcgtg
541 gggaacctgg gtgaaggcac ctttggcaag gtggtggagt gcttggacca tgccagaggg
601 aagtcacagg ttgccctgaa gatcatccgt aatgtgggca agtatcggga agctgctcgt
661 ctagaaatta atgttctcaa gaaaatcaag gagaaagaca aggaaaataa gttcctttgt
721 gtcctgatgt ctgactggtt caacttccat ggtcatatgt gcatcgcctt tgagctcctg
781 ggcaagaaca cctttgagtt cctgaaggag aacaacttcc agccttaccc cctaccacat
841 gtccggcaca tggcctacca gctctgtcat gcccttagat ttctacacga gaaccagctg
901 acccacacag acttgaagcc agagaacatc ttgtttgtga attctgagtt tgaaaccctc
961 tacaatgagc acaagagctg cgaggagaag tcagtgaaga acaccagcat ccgagtggca
1021 gactttggca gtgccacgtt tgaccatgaa catcacacca ccattgtggc cacccgtcac
1081 taccgcccac ctgaggtgat ccttgagctg ggctgggcac agccttgtga tgtctggagt
1141 atcggctgca ttctctttga gtactaccgt ggctttacac tcttccagac ccatgaaaat
1201 agagaacact tggttatgat ggagaagatt ctaggaccca tcccatcaca catgatccac
1261 cgtaccagga agcagaaata tttctacaaa gggggcctgg tttgggatga gaacagctct
1321 gatgggcggt atgtgaagga gaactgcaaa cctctgaaga gttacatgct gcaggactcc
1381 ctggagcatg tgcagctgtt tgacctgatg aggaggatgt tagagttcga ccctgctcag
1441 cgcatcacat tggcagaagc cttgctgcac cccttctttg ctggcctgac ccctgaggag
1501 cggtccttcc acagcagccg taaccccagc agatgacagg tgcaggccag cacacgaaga
1561 gttggagagc tggactgggc tgctggcccc ttttctccag cctctcccac tggcctcaga
1621 gccagagcca ccgatgaaca gtgcaatgtg aaggaaggca ggacctgcaa gggaaggggg
1681 aatgtggtgc ccggctgcca gaaagcacag attggaccca agcttttata tgttgtaaag
1741 ttataataaa gtgtttctta ctgtttgtaa aaaaaaaaaa aaaaaaa

Figure 5

MRHSKRTHCPDWDSRESWGHESYSGSHKRKRRSHSSTQENRHCKPHHQFKD
SDCHYLEARCLNERDYRDRRYIDEYRNDYCEGYVPRHYHRDVESTYRIHCSKS
SVRSRRSSPKRKRNRPCASHQSHSKSHRRKRSRSIEDDEEGHLICQSGDVLRAR
YEIVDTLGEGAFGKVVECIDHGMDGLHVAVKIVKNVGRYREAARSEIQVLEH
LNSTDPNSVFRCVQMLEWFDHHGHVCIVFELLGLSTYDFIKENSFLPFQIDHIR
QMAYQICQSINFLHHNKLTHTDLKPENILFVKSDYVVKYNSKMKRDERTLKN
TDIKVVDFGSATYDDEHHSTLVSTRHYRAPEVILALGWSQPCDVWSIGCILIEY
YLGFTVFQTHDSKEHLAMMERILGPIPAHMIQKTRKRKYFHHNQLDWDEHSS
AGRYVRRRCKPLKEFMLCHDEEHEKLFDLVRRMLEYDPARRITLDEALQHPFF
DLLKRK

Figure 6

1 aaagagacgc agcggctgga gaggaacgac ggcggtttgg cgacatttct gcccaaaagg
61 ccgcttgctt ttgcggagat gcggcattcc aaacgaactc actgtcctga ttgggatagt
121 agagaaagct ggggccatga aagctacagt ggaagtcaca aacgcaagag aaggtctcac
181 agcagtactc aggagaacag gcactgtaaa ccacatcatc agtttaaaga ctcggattgt
241 cactatttag aagcaagatg cttgaatgag agagattatc gggaccggag atacattgat
301 gaatacagaa atgactactg cgaaggatat gttccaagac attaccatag agacgttgaa
361 agcacttacc ggatccattg cagtaaatcc tcagtcagga gcaggagaag cagccctaag
421 agaaagcgta atagaccctg tgcaagtcat cagtcgcatt cgaagagcca ccgaaggaaa
481 agatccagga gtatagagga tgatgaggag ggtcacctga tctgtcaaag tggagacgtt
541 ctaagagcaa gatatgaaat cgtggacact ttaggtgaag gagcctttgg caaagttgta
601 gagtgcattg atcacggcat ggatggctta catgtagcag tgaaaattgt aaaaaatgta
661 ggacgttacc gggaggcagc tcgttctgaa atccaagtat tggagcactt gaacagcact
721 gaccccaaca gtgtcttccg atgcgtccag atgctagagt ggtttgatca tcatggtcat
781 gtttgtattg tgtttgagct gctgggactt agtacctatg attttattaa agaaaatagt
841 tttctgccat ttcaaattga tcacatcagg caaatggctt atcagatctg ccagtctata
901 aatttttac atcataataa attaacacac acggacctaa aacctgaaaa tattttattt
961 gtgaagtctg actatgtagt caaatacaat tctaaaatga aacgagatga gcgcacattg
1021 aaaaacacag atatcaaagt tgttgatttt ggaagtgcaa catatgacga cgaacatcat
1081 agtactttgg tgtccacaag gcactacagg gctccagagg tcattttggc tctaggttgg
1141 tctcagcctt gtgatgtttg gagcataggc tgcattctta ttgagtacta ccttgggttc
1201 acagtctttc agacccacga tagtaaagag cacctggcaa tgatggagcg gatcttagga
1261 cccatcccag cacatatgat ccagaagaca aggaaacgca agtatttcca ccataaccag
1321 ctagattggg acgagcatag ttcagctggg agatatgtta ggagacgctg caagccgtta
1381 aaggaattta tgctgtgtca tgacgaagag catgagaagc tgtttgacct ggttcgaaga
1441 atgttggagt atgacccagc gagaaggatc accttggatg aagcattgca gcacccttc
1501 tttgacttat taaaaaggaa atgagtggga gtcagggcgg ccgcaccgc

Figure 7